CLAIMS

1. A method for generating a transition of a plurality of output images from a first sequence of images to a second sequence of images wherein an image at an end of the first sequence is not contiguous with an image at a beginning of the second sequence, the method comprising:

for each output image, selecting a pair of a first image from the first sequence and a second image from the second sequence such that the output image has a point in time between the first image and the second image in the transition;

for each selected pair of first and second images, determining a set of motion vectors that describes motion between the first and second images;

for each output image, calculating a factor that represents the point in time, between the first and second images selected for the output image, at which the output image occurs;

for each output image, performing motion compensated interpolation to generate the output image according to the determined set of motion vectors and the calculated factor.

2. The method of claim 1, wherein the first sequence has associated audio and the second sequence has associated audio, the method further comprising:

dissolving the audio associated with the first sequence to the audio associated with the second sequence.

3. The method of claim 1, wherein a combination of the output image and the first and second images provides an output sequence of images with a duration at playback different from a duration of an input sequence of images containing the first and second images at playback, and wherein the input sequence of images has associated audio with a duration, the method further comprising:

adjusting the duration of the audio to match the duration of the output sequence of images.

4.   A method for processing a jump cut from a first image at an end of a first segment of sequence of images and corresponding audio and a second image at a beginning of a second segment in the sequence of images and corresponding audio, comprising:

5   processing the corresponding audio to identify an audio break between the audio corresponding to the first segment and the audio corresponding to the second segment;

determining a set of motion vectors that describes motion between the first and second images; and

performing motion compensated interpolation to generate one or more images

10   between the first image and the second image according to the determined set of motion vectors at a point in time corresponding to the audio break.

5.   The method of claim 4, further comprising:

dissolving the audio associated with the first sequence to the audio associated

15   with the second sequence around the audio break.

6.   The method of claim 5, wherein determining a set of motion vectors comprises determining a motion vector for each pixel in an image at a map time between the first image and the second image, wherein the map time is different from the point in time of

20   the output image, wherein the motion vector describes motion of a pixel of the image at the map time to a first point in the first image and a second point in the second image, and wherein performing motion compensated interpolation comprises:

calculating a factor that represents the point in time between the first image and the second image at which the output image occurs;

25   warping the first image according to the determined motion vectors and the factor;

warping the second image according to the determined motion vectors and the factor; and

blending the warped first image and the warped second image according to the

30   factor to obtain the output image.

7.   The method of claim 5, wherein determining a set of motion vectors comprises determining a motion vector for each pixel in an image at a map time between the first image and the second image, wherein the motion vector describes motion of a pixel of the image at the map time to a first point in the first image and a second point in the

5   second image, and wherein performing motion compensated interpolation comprises:

for each output image, calculating a factor that represents the point in time between the first image and the second image at which the output image occurs;

for each output image, warping the first image according to the determined motion vectors and the factor for the output image;

10   for each output image, warping the second image according to the determined motion vectors and the factor for the output image; and

for each output image, blending the warped first image and the warped second image according to the factor for the output image.

15   8.   A method for changing duration of an input sequence of images with associated audio, wherein the input sequence of images and associated audio has a duration, comprising:

receiving an indication of a selection of an operation by an operator indicative of a desired duration of an output sequence of images, and, in response to the received

20   indication:

selecting a first image and a second image in the sequence of images;
determining a set of motion vectors that describes motion between the first and second images;

performing motion compensated interpolation to generate one or more images

25   between the first image and the second image according to the determined set of motion vectors;

repeating the selecting, determining and performing steps for multiple pairs of first and second images in the sequence of images to provide the output sequence of images; and

30   adjusting the duration of the associated audio to retain synchronization with the output sequence of images.

9.   The method of claim 8, further comprising:

        playing back the output sequence of images with the audio.

10.   The method of claim 8, wherein adjusting comprises resampling of the audio.

11.   The method of claim 8, wherein adjusting comprises time scaling of the audio.

12.   A method for performing color correction, comprising:

        generating a first color histogram from first image from a first sequence of
images;

        generating a second color histogram from a second image from a second sequence of
images;

        determining a set of motion vectors from the first and second color histograms
that describes motion between the first color histogram and the second color histogram;

        generating a table of color correction values from the set of motion vectors; and

        applying the table of color correction values to a sequence of images.